THE DEPUTY PRIME MINISTER AND THE MINISTER OF AGRICULTURE (SHRI DEVI LAL): (a) No, Sir.

(b) Effective control of whitefly has been achieved in some South American Countries like Colombia, Brazil and Venezuela by integrated Pest Management techniques, which comprise of cultural, mechanical, biological control methods and only need-based application of pesticides. Integrated Pest Management is the main thrust of plant protection strategy in India.

Pests resistant to pesticides

2202. SHRI SHAMIM HASHMI: Will the Minister of AGRICULTURE be pleased to state whether several pests have developed resistance to pesticides used in the country and if so, the details thereof, indicating names of all registered pesticides and the pests found resistant against each of these with levels of pesticide resistance?

THE DEPUTY PRIME MINISTER AND THE MINISTER OF AGRICULTURE (SHRI DEVI LAL):

Details of pests against which pesticide resistance has been reported in the country are as under

Sl. No.	Pest	Pesticide	Level of Resistance
1	Singhara beetle	DDT, BHC	Control failure
2	Tobacco caterpillar	BHC	7 fold.
		Malathion	5.7 fold.
		Pyrethrum	14.7. fold.
		Lindane	16.3 fold.
		Endosulfan	85.9 fold
3	Dimond back moth	Fenitrothion	Control failure
		Malathion	
		DDT	
4	American bollwrom	DDT	70- 303 fold
		Endosulfan	12.2- 12.5 fold.
		Monocrotophos	3.6 fold.
		Cypermethrin	19- 2510 fold
		Fenvalerate	120- 287 fold.
5	Mustard aphid	Endosulfan	13- 24 fold
		Malathion	4- 6 fold.
		Dimetholate	4- 6 fold.
6	Flour Beetle	DDT	2.3- 10 fold
		Lindane	Resistant*
		Malathion	16- 37.8 fold.
7	Rice Weevil	Malathion	5.8 fold.
		Lindane	Resistant*
		Phosphine	Do.
8	Lesser Grain Borer	Malathion	Do.
		Lindane	Do.
		Phosphine	Do.
9	Saw-toothed Grain-Beetle	Malathion	Do.
10	Khapra Beetle	Phosphine	40 fold.

*Precise level not determined.